مراجعات النخبة

بنك الأسئلة

Science Final Review 2025

Science



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Question 1 choose the correct answer

Concept 3.1

1. In the battery of a toy car...........energy is converted into electrical energy

(a) Chemical (b) Sound
(c) Light (d) thermal

2. Plants can convert the light energy from the Sun into........ energy which is stored in the plant in the form of sugar.

(a) Sound (b) Electrical
(c) Chemical (d) kinetic

3. Electric wires are made of

(a) Copper (b) Paper
(c) Wood (d) glass

4. Some kinetic energy is converted into.......... energy due to friction of bike's tire with the road.

(a) Light (b) Electrical
(c) Potential (d) thermal

5. When you use the hand bell, the......... energy is converted into sound energy

(a) Light (b) Thermal
(c) Kinetic (d) electric

6. When a piece of coal is burned,........... energy is produced.

(a) Thermal (b) Solar
(c) Sound (d) potential

7. The......... on the rover Curiosity convert solar energy into............ energy which is used to charge its batteries.

(a) solar panels – electrical (b) batteries electrical
(c) solar panels – sound (d) batteries sound

8. The input energy in the fridge is ....energy

(a) Electrical (b) Sound
(c) Chemical (d) thermal

9. The spring of a spring toy car convert........... energy into .... energy

(a) chemical – electrical (b) Kinetic - chemical
(c) Electrical - chemical (d) Potential - kinetic

10. As energy transforms from one form to another, some of it is often lost as

(a) Light (b) Heat
(c) Sound (d) movement

11. The Curiosity Rover is operated with.............. energy

(a) Sound (b) Solar

(c) Kinetic (d) thermal

Concept 3.2

12. On burning fuel, we obtain...........

(a) sound energy. (b) potential energy

(c) electrical energy (d) thermal energy

13. Car engines can be operated by................

(a) coal only. (b) coal and wood.

(c) gasoline only (d) gasoline and natural gas

14. The two main types of fuel are....

(a) wood and coal (b) water and wind

(c) the Sun and the moon (d) fossil fuels and biofuels.

15. Smog causes irritation of ....of humans

(a) stomach and eyes (b) eyes and lungs

(c) small intestine (d) large intestine

أنت أقوى مما تتخيل ..
آمن بقدراتك !



16. Smog contains tiny particles that...........

(a) damage the human respiratory system

(b) damage the human digestive system

(c) help the human body grow up

(d) keep the human body healthy

17. Acid rain is formed when .... combines with rain water

(a) oxygen gas (b) carbon dioxide gas

(c) Dust (d) sand

18. All the following are harmful effects of acid rain, except.......

(a) global warming

(b) death of trees

(c) change in the chemical nature of lakes.

(d) change in the chemical nature of the soil

Concept 3.3

19. All of the following are examples of renewable energy resources, except......

(a) fossil fuel (b) waterfalls

(c) wind (d) sunlight

20. The wind movement has............energy which moves the blades of windmills

(a) Kinetic (b) Solar

(c) Thermal (d) potential

21. Both modern wind turbines and modern water turbines are similar in their.........

(a) Shape
(b) ability to generate electrical energy.
(c) blades number
(d) ability to generate potential energy



22. Greenhouses allow farmers to plant crops that only grow in...................

(a) polar climate
(b) warm climate.
(c) absence of sunlight
(d) absence of water

23. Solar water heater changes................ energy into ....energy

(a) electrical- thermal
(b) solar-sound
(c) electrical sound
(d) solar thermal

24. The reason of flowing of river water downhill is the........ force

(a) Pushing
(b) Friction
(c) Gravitational
(d) electrical

25. Using of water to generate electricity depends on places ....

(a) with strong winds
(b) where dams are built on rivers.
(c) with weak winds
(d) where boats sail in rivers

26. The water behind a dam stores ....energy

(a) Kinetic
(b) Thermal
(c) Potential
(d) electrical

27. The form of energy resulted from waterfalls is called .... energy

(a) Thermal
(b) Chemical
(c) Solar
(d) hydroelectric

28. River water evaporates by the help of heat produced from...........

(a) Kettles
(b) the Sun
(c) electric heaters
(d) electric iron

29. In the water cycle, the water evaporates, then it condenses in form of .... and returns back through rain falling

(a) Clouds
(b) Sand
(c) Rocks
(d) coal

30. Sand is formed due to breaking down of.............

(a) Glass
(b) Wood
(c) Rocks
(d) plastic

Concept 4.1

31. The deep narrow valley with slopes at its sides and often with water stream flowing through it is known as a........................

(a) Canyon (b) Mountain
(c) Hill (d) river

32. The condition of atmosphere including temperature, wind and rains is known as............

(a) Weather (b) Weathering
(c) Erosion (d) deposition



33. The dropping of sediments in a new place, is known as

(a) Weathering (b) Deposition
(c) Freezing (d) erosion

34. Limestone caves are formed due to the combination of

(a) dissolved minerals (b) red-colored rusts
(c) living organisms. (d) acid rains

35. Lichens produce ....on rocks that dissolve minerals found in these rocks

(a) Oxygen (b) Acids
(c) Water (d) rain

36. Water can cause ....that affect(s) the shape of the Earth

(a) mechanical weathering only
(b) chemical weathering only
(c) both mechanical and chemical weathering
(d) neither mechanical nor chemical weathering

37. Which of the following arrangements is correct about reshaping Earth's surface ....

(a) Erosion → Weathering → Deposition
(b) Erosion→ Deposition → Weathering
(c) Deposition → Erosion → Weathering
(d) Weathering → Erosion → Deposition

38. Gentle wind can carry................ for a short distance



(a) a large rock
(b) sand grains
(c) a large body of water
(d) a big mass of mud

39. When a river that carries sediments meet a sea,............. is formed

(a) a large mountain (b) a triangle-shaped delta
(c) small sand dune (d) a large sand dune

Concept 4.2

40. When a rock blocks the paths of flying sand, a ……… may be formed

(a) canyon (b) Dune
(c) River (d) valley

41. A canyon may be formed due to the effect of…………

(a) erosion and deposition (b) weathering and erosion
(c) weathering and deposition (d) deposition only

42. Walls of canyons are characterized by all the following, except that they

(a) are very high. (b) are gently sloped
(c) have great depth (d) consist of many rocks layers

43. The delta is formed when the river stream entering all of the following, except

(a) a lake (b) a mountain
(c) a sea (d) an ocean

44. Nile River Delta is characterized by the presence of ………that allows the planting of different types of crops

(a) Mountains (b) fertile soil
(c) sand dunes (d) polluted soil

45. Among canyons which have V-shape are

(a) Wadi Nakhr and the Small Canyon
(b) the Small Canyon and the Colored Canyon.
(c) the Colored Canyon and Wadi Rum
(d) Wadi Nakhr and Wadi Rum

Question 2

Put (✓) or (×) answers

Concept 3.1

1)	The spacecraft takes a bout five months, usually longer to reaches to mars.	( )
2)	The cars toy need a source of energy	( )
3)	The energy stored in soap dispenser is potential energy	( )
4)	The energy produces from sun is light energy only	( )
5)	Light energy is produced only by electrical bulbs	( )

6)	The stored energy in the spring is kinetic energy	( )
7)	Energy cannot be created nor destroyed	( )
8)	In electrical iron, electric energy converts into thermal one	( )
9)	In cell phone, electric energy stored in battery	( )
10)	The primary and main source of fuels is moon	( )
11)	Coals are from renewable fuels	( )
12)	Biofuels are renewable fuels	( )
13)	Liquid fuels were formed from the remains of plants and animals that lived millions years	( )
14)	Coal is used in cooking food	( )
15)	Cars and trucks don't need fuels to move	( )
16)	The primary and main source of fuels is wind	( )
17)	Fossil fuels are from renewable sources of energy	( )
18)	Natural gas is used in cooking food	( )
19)	Wind is non-renewable resource of energy	( )
20)	Electricity has an important role in our life	( )
21)	Fossil fuels can be used only in generating electricity	( )

22)	Fossil fuels are important in generating electricity	( )
23)	Coal is only fossil fuels	( )
24)	Water is from nonrenewable energy resources	( )
25)	Nitrogen is the cause of global warming	( )
26)	Oxygen gas is formed by burning of fossil fuels	( )
27)	Fossil fuels have negative impacts on the environment	( )
28)	Oxygen combines with water vapour in the atmosphere and forms acidic rains	( )
29)	Wind is non-renewable resources of energy	( )
30)	In greenhouse the radiant energy from sun convert to electric energy	( )
31)	The concave mirror is used in collecting and focusing sunlight	( )
32)	Kinetic energy can be used in electric generation	( )
33)	The input of the solar panels system is electric energy	( )
34)	Sun light known as radiant energy or radiation	( )
35)	Canyon formed at a short period of time	( )
36)	The process of deposition occurs when sediment down	( )
37)	Wind causes beach erosion	( )

Concept 3.3

Concept 4.1

38)	Wabi Nakhr in the country of Oman	( )
39)	Erosion and weathering change the shape of Earth's surface	( )
40)	Both of sandcastles and canyons can be formed in few hours	( )
41)	There are some similarities between sandcastles and coastal rocks	( )
42)	Water may cause mechanical and chemical weathering	( )
43)	Chemical weathering could occur due to the acid that is produced from lichens or present in some rains.	( )
44)	Limestone caves are formed due to friction between sand and rocks	( )
45)	Crushing a piece of biscuit by hands can represent a type of chemical weathering	( )
46)	Limestone caves formed withen few hours	( )
47)	You can see the reshaping of Earth's surface during its occurrence	( )
48)	If there is no erosion process, there is no deposition process in another place	( )
49)	Erosion and deposition are two linked processes	( )
50)	The Colored Canyon in Sinai is formed due to erosion by water for a short period of time Concept 4.2	( )
51)	There are no trees or plants grow on the both sides of a canyon at the beginning of its formation	( )
52)	The walls of canyons may be eroded by the effect of a river movement	( )
53)	Big streams cause more erosion than small streams.	( )

54)	All canyons have the same shape	( )
55)	Canyons differ in colors and texture of rocks	( )
56)	Dunes are special type of valleys which is formed due to wind erosion	( )
57)	Deltas may contain fertile soil which is suitable for cultivating many crops	( )
58)	Canyons are similar to each other	( )
59)	Plants on both sides of the canyons indicate the presence of water	( )
60)	Colored canyon is found in Sinai	( )
61)	Canyon is formed due to weathering and deposition	( )
62)	The more water flows , the more erosion	( )
63)	There are a lines in some canyons.	( )
64)	As rivers drain, they create a variety of different landforms	( )
65)	Grand Canyon is landform in South America	( )
66)	The grand canyon is the largest canyon in the world	( )
67)	Gravity pulls rainwater downhill	( )
68)	Deltas are not formed by erosion	( )
69)	Wind and sand work together as forces of erosion and osition	( )

70)	Valleys and canyons are formed by erosion	( )
71)	The Nile River Delta was formed as a result of the rapid flow of the Nile River	( )
72)	The Nile River Delta is square in shape	( )
73)	The Nile River Delta is the famous delta in the world	( )
74)	Deltas are formed by weathering	( )
75)	Silt is made of very fine bits of sand, clay or rock materials	( )
76)	Most delta form where flowing water enters still water	( )
77)	Sand dunes are hills that are made of sand	( )

Question 3 Complete the following sentences

Concept 3.1

1)	The idea of designing the Mars Rover depends on the idea of transforming (..........) energy into (.........) energy
2)	Batteries which put inside the toy is considered as (.........)
3)	The missions of mars depend on (.........) and(.........)
4)	The main source of energy in the Earth surface is(.........)
5)	The energy produced by hair dryer are (.........) and (.........)
6)	The car which operated by a spring (.........)energy converts into (.........) energy
7)	When you eat breakfast, (.........) energy stored from food



8)	The energy source in the toy car is the (.........)
9)	The energy can be (.........) from one form to another
10)	Remote controlled toy car converts (.........) energy stored in its batteries into (.........) energy that is converted into (.........) energy which is used to move the car
11)	When your cell phone is out of charge, you must recharge its (.........) to operate it again
12)	Some calculators can change solar energy into (.........) energy by using the sunlight
13)	On planet Mars, Curiosity robot is operated by using (.........) energy from sunlight that is converted into (.........) energy used to recharge its batteries
14)	The energies that are produced from the washing machine are (.........) energy and (.........) energy
15)	(.........) is produced from the remains of dead trees buried in Earth over millions of years
16)	When you press on the soap dispenser,(.........) energy stored in its spring is converted into (.........) energy that moves the soap upward
17)	In any energy chain, some of the energy is wasted in the form of(.........)
18)	The light energy from the Sun is converted and stored inside plants in the form(.........)energy
19)	Energy can neither be (.........) nor (.........) but only (.........) from one form to another
20)	The kinetic energy in a hand bell is considered as(.........)energy, while in an electric fan is considered as (.........)energy
21)	Gasoline is burned inside a car engine to produce (.........) energy that is converted into (.........) energy which causes the movement of the car Concept 3.2

22)	Some forms of fuel can be used in cooking such as(.........) , (.........) and (.........)
23)	We can use some forms of fuel in warming houses such as(.........) And (.........)
24)	Water is considered from (.........) resources of energy, while coal and (..................) are from nonrenewable resources of energy
25)	The natural resources that can be replaced shortly after being used are called (.........) resources of energy
26)	The natural resources that are consumed at a rate faster than they can be renewed are called(.........) resources of energy
27)	Different forms of fuel can be classified into two main types which are(........) and (.........)
28)	The type of fuel that is produced from living organisms that can be planted is called(.........).such as wood and (.........)
29)	Wood and (.........) are examples of biofuel, while(.........)and(.........)are examples of fossil fuel
30)	Wood chips and grass can be used to make a (.........) biofuel.
31)	Oil formed from the decomposition of (.........) and as a result of extreme heat and (.........)
32)	The energy comes from a power plant comes through burned(.........) and (..................)
33)	From the type of fuels are (.........,,........,.........)
34)	Cars and trucks need (.........)to move
35)	The fuels is used in (.........) (.........)
36)	Fuels are (...)

37)	(………) and (………) can be used to make a liquid fuels
38)	Biofuels can be produced by (………) , (………)
39)	The primary and main source of fuels is (………)
40)	Examples of fossil fuels (………) and (………)
41)	(………)is from renewable fuels
42)	(………)and (………) are from non-renewable sources of
43)	By burning fuels (………) is released
44)	The remains of plants and animals turned into coal by (………) and (………) of Earth
45)	(………) has a variety of negative impacts on environment
46)	In electric power station, we use fossil fuels such as oil and natural gas which are considered as (………) resources of energy
47)	Water is considered as (………)resource of energy, and we can use it to generate (………)
48)	When fuel is burned in an electric power station, it produces (………) energy to heat water
49)	Generators in electric power stations change (kinetic)energy into (………)energy
50)	During generating electricity in electric power stations, the hot water produces (………) which is used to turn turbines
51)	Turbines in electric power stations are turned by steam to produce (………) energy required to operate the (………)of the electric power stations



52)	Inside electric power stations, the burning of fuel produces (.........)energy while the movement of turbines produces (.........) energy
53)	Some mills used (.........) and other used (.........)
54)	From the renewable energy resources (.........,.........)
55)	The output of the solar panels system is (.........) energy
56)	Energy received from the sun is called (.........)
57)	Solar panels are used to (.........)
58)	The water can be heated by passing through (.........) colour tubes
59)	Sun is a (.........) energy resource.
60)	(.........And ....) is used to crush grain to make flour
61)	All plants and animals need (.........) to survive
62)	(Concave (.........) mirrors is used in collecting and focusing sunlight
63)	In greenhouses radiant energy from the sun convert to (.........) energy
64)	Wind is(.........) energy resources.
65)	The input of the solar panels system is (.........) energy
66)	Water can be used to (.........)
67)	Electricity that formed by water is called (.........)

Concept 3.3

68)	The water from the rivers above the dam stores (.........)
69)	Water is (.........) energy resources
70)	Wind can be used to (.........)
71)	The gravitational potential energy of rivers water convert to (.........) energy
72)	The (.........) in the dam generate electricity
73)	Water from (.........) is used in electricity generation
74)	Wind is a (.........) energy resource
75)	The water flow has kinetic energy, which moves the (.........) of water turbines to transform this energy into (.........) energy
76)	Both (.........) and (.........) are used to crush grain hundreds of years ago
77)	When we expose our bodies to the Sun, we feel(.........)
78)	We can use solar energy in cooking by using (.........) which collect and focus (.........) onto metal pots to heat them
79)	Greenhouses convert the radiant energy of the sun rays into (.........) energy that allows farmers to plant crops which grow in (.........) climates
80)	In some villages, solar panels are used to generate (.........) energy that is used to operate (.........) equipments
81)	Wind is formed due to the effect of (.........) energy coming from the (.........) in the form of rays
82)	Wind blows due to the difference in (.........) between the cold air and the hot air.
83)	When the....... (.........) energy of wind increases, the speed of rotation of turbine blades will (.........)



84)	When rivers flow downhill,...... (.........) energy of water is converted into (.........) energy that rotates water turbine
85)	The type of electrical energy which is produced by water turbines is called (.........)
86)	Renewable energy resources include...The sun,... (.........) and (.........) ...
87)	Clouds are formed due to the(.........) then (.........) of water of rivers and seas.
88)	In water turbines, the(.........) energy of water movement is converted into a type of electrical energy which is called .... (.........) energy
89)	Wadi Nakhr located in the country of (.........)
90)	Canyon is formed by (.........)
91)	The process by which rocks are broken into smaller pieces is known as (.........)
92)	The process by which rocks or soil moving is known as (.........)
93)	Sediment down is a process of (.........)
94)	Canyon is formed after (.........)
95)	Some changes to Earth's surface happen take (.........) time and some take (.........) time
96)	Coastal rocks are formed by a (.........) period of time
97)	(.........) ...moving soil from one place to another
98)	(.........) causing beach erosion
99)	The type of weathering in which the rocks are broken down due to plant roots is known as ...... (.........) weathering

Concept 4.1



100)	The type of weathering in which the structure of rocks changes due to chemical reactions is known as …… (………) weathering
101)	Some tiny plant-like organisms produce …… (………) that can dissolve minerals of rocks causing their breaking down
102)	Lichens produce acids on rocks that dissolves their … …………….
103)	Mechanical weathering takes place when …… (………) occurs between sand carried by wind and rocks
104)	Flowing water which carries small gravel and sand may break down large… (………) and cause … (………) weathering
105)	The cracks caused by freezing of water and melting of ice represent (………) weathering
106)	Sand grains fall on the ground when the (………) carrying it stops.
107)	Strong wind and hurricanes carry (………) for a long distance
108)	Gentle winds can form small (………) like that present at sea beaches
109)	Putting some biscuits in a cup of water that contains antacid is like the (………) weathering of rocks
110)	Wind, (………)and gravity are natural factors that control erosion process **Concept 4.2**
111)	Sand grains fall on the ground when the (………)carrying it stops.
112)	Sediments are moved by the effect of (………) and (water)then settles on the surface of land or the bottom of water
113)	Blowing of strong (………)in the desert may form large sand dunes
114)	Strong wind and hurricanes carry (………)for a long distance

115)	Gentle winds can form small (.........)like that present at sea beaches
116)	Water and wind are factors that cause (.........) (.........) (.........)
117)	Canyon is formed by (.........) and (.........) processes
118)	Canyon is formed at (.........) of years
119)	Colored canyon found in (.........) , (.........)
120)	Canyons are differ for each other in (,.................)
121)	The sides of canyons are (.........)
122)	Plants on both sides of the canyons indicate the presence of (.........)
123)	Wadi Nakhr is found in (.........)
124)	Canyons may differ of each other in (.................,)
125)	Canyon may formed by weathering and erosion with the effect of (...............) and (...............)
126)	The erosion and deposition can lead to formation of some new of (...............)
127)	The greater the water flow greater the (...............)
128)	A Canyon is a type of (...............)
129)	The valley formed depends upon several factors (...............) and (............................)
130)	The formation of canyons take place during (...............) years

131)	Fast moving rivers can cause a lot of (...............)
132)	Grand canyon is a landform in (...............)
133)	()pulls rain water downhill (...............)
134)	Valleys can be formed by (...............) or (...............)
135)	Canyon walls are (...............)
136)	(...............)or rivers produce greater change
137)	Grand canyon is a (...............)in North America
138)	From an examples of canyon are (...............) and (...............)
139)	(Nile river Delta) is the most famous delta in the world.
140)	The delta is characterized by the presence of (..............................)
141)	Nile River Delta lies between.(...............) and (...............)
142)	The river water is full of (...............)
143)	Some landforms are created by (...............) and (...............)
144)	Wind and sand work together to (...............) rocks
145)	Deltas are formed by (...............)
146)	Wind and sand work together as forces of (...............) and (...............)

147)	The Nile River (...............) in shape
148)	Dunes can be (...............) of meters tall
149)	Canyons are formed by (...............)
150)	Valleys are formed by (...............)
151)	Deltas are formed by (...............)

Question 4 Give reason

Concept 3.1

1) The energy can change its forms but it never goes away

- ....

2) You fell heat when you hold your hand near to light bulb

- ....

3) When you push on the bike pedals with your legs , heat energy is produced

- ....

4) There is a change in energy when burning wood

- ....

5) The body has energy inside it

- ....

6) Not all the energy that enters the energy chain completely reaches the device.

- ....

7) A remote-controlled toy car needs a battery to move from one place to another

- ....

8) There is an energy change when you press the spring of a soap dispenser

- ....

9) When you rub your hands together, you feel warm

- ....

10) You feel heat, when you put your hands near a lighted electric lamp.

- ....

11) The electrical energy that enters the hair dryer does not come out of the hair dryer in the same form of energy.

- ....

12] Sometimes the fuel indicator of a car goes down

- ....

13] Some calculators use the sunlight to operate.

- ....

14] The fuel is very important for different means of transportation.

- ....

15] Thermal energy in a mobile phone is considered as a wasted energy.

- ....

Concept 3.2

16] Generators are important in electric power stations

- ....

17] We must turn off lights that we do not need.

- ....

18] Smog of cars is very dangerous to human health.

- ....

19] Farmers must decrease the use of pesticides

- ....

20] Increase the burning of fossil fuel causes acid rain.

- ....

21] Global warming occurs due to the increase of burning coal and oil.

- ....

22] To keep the air clean, we must replace fossil fuels with renewable resources of energy.

- ....

23] Fossil fuels are non-renewable sources of energy

- ....

24] Biofuels are renewable sources of energy

- ....



25] Sun is renewable source of energy

- ....

26] Using wood of trees as a fuel has negative effects on the environment.

- ....
....

27] Coal and gasoline are considered as nonrenewable resources of energy.

- ....

28] Gasoline is burned inside a car engine

- ....

29] Mars rover Curiosity operates for a long period of time on Mars without any need to be recharged.

- ....

Concept 3.3

30] Sun is very important to plants and animals.

- ....

31] The solar energy is clear energy resource

- ....

32] The concave mirror can be used in cooking

- ....

33] Turbines and generators in dams have important role

- ....

34] The renewable energy resources are very important

- ....

35] Dams have important role in electricity generation

- ....

36] Humans used windmills and watermills from hundreds of years ago

- ....

37] Sometimes the Sun is not visible in the sky but you can feel its warmth

- ....

38] Farmers use greenhouses to plant crops which grow only in warm climate

- ....

39] Some electrical devices have solar panels which are composed of many solar cells

- ....

40] Kinetic energy of wind affects the speed of wind turbine blades rotation.

- ....

41] Sometimes the wind turbines are useless

- ....

42] Hydroelectric dams are built on rivers

- ....

....

Concept 4.1

43] Formation of canyons is considered as an example of slow changes

- ....

44) Iron in rocks may rust.

- ....

45) Water plays an important role in the formation of limestone caves

- ....

46) Formation of a delta when a river meets a sea.

- ....

47) Formation of small sand dunes on a beach

- ....

48) Formation of large sand dunes at Western Desert in Egypt

- ....

49) There are the relation between erosion and weathering

- ....

50) Trees and other plants are growing on both sides of small canyons

- ....

Concept 4.2

51) It might be useful to recognize signs of weathering, erosion and deposition

- ....

52) The sides of canyon at the beginning of its formation are gently sloped

- ....

53) Valleys have different shapes

- ....
- ....

54) Canyon may be formed as a result of river streaming

- ....

55) Plants of wetland areas help in formation of deltas

- ....

56) A sand dune may be formed in front a large rock in desert

- ....

57) Gravity has an important role in the formation of canyon

- ....

58) . Canyon does not form quickly

- ....
....

59) . Rainwater downhill

- ....

60) Deposition is very important process in agriculture

- ....

61) The Nile River Delta is a suitable place for agriculture

- ....

62) The Nile River Delta is the most famous delta in the world

- ....

Question 5 What happens ?

Concept 3.1

1) If batteries of remote-controlled toy car run out.

- ....

2) To the car fuel indicator if the amount of gasoline in a car decreases.

- ....

3) To the change of energy when you burn a piece of wood.

- ....

4) If solar calculators were exposed to the sunlight.

- ....

5) If you put your hands near the lighted lamp

- ....

6) If you use a mobile phone for a long time. (according to the wasted energy).

- ....



7) To the car movement if fuel runs out in a car

- ....

8) If Mars rover Curiosity didn't get any sunlight on Mars surface.

- ....

9) If you turn on an electric fan (according to the change of energy).

- ....

10) To the change of energy when you turn on the television

- ....

11) If you shake a small bell with your hand. (according to the change of energy).

- ....

12) Hair dryer is operated

- ....

13) Cool is burned

- ....

14) Electrical heater is operated

- ....

15) You hold yours hand near to light bulb

- ....

16) You push on the bike petals

- ....

17) Turn on electric iron

- ....

Concept 3.2

18) To a generator that is connected to a damaged turbine in an electric power station.

- ....

19) To the movement of the turbine if the water in an electric power station is not heated

- ....

20) If pesticides mix with water of canals and rivers

- ....

21) If acid rain falls on buildings for a long period of time.

- ....

22) If people decrease burning fossil fuels

- ....

23) To the amount of fossil fuels if people don't conserve their usage

- ....

24) Cutting down trees

- ....

25) Burning fuels

- ....

26) If the remains of dead living organisms were buried under the Earth's surface over millions of years.

- ....

Concept 3.3

27) If the remains of sea animals are decomposed under the Earth's surface

- ....

....

28) The radiant energy enters the greenhouse

- ....

29] The concave mirror used in cooking

- ....

30] Rivers run downhill

- ....

31] Turbines and generators are stopped in dam

- ....

32] Stop building of dams

- ....

33] Water passing through blacks tubes.

- ....

34] Wind doesn't blow in an area that contains many modern wind turbines

- ....

35] Sunlight falls on solar panels

- ....

36] Sunlight falls on a greenhouse

- ....

37] The solar cells in a calculator are exposed to sunlight

- ....

38] The kinetic energy of a wind that is applied on the wind turbine increases

- ....

39] There is difference in temperatures of air around Earth

- ....

40] Water turbines are placed in a dam

- ....

41] Potential energy of water increases behind a dam that has water turbines

- ....

42] Water of seas and rivers evaporates, then condenses in the atmospheric air

- ....

Concept 4.1

43] Waves crash the beach

- ....

44] Sediment down

- ....

45] Sea waves hit coastal rocks over a long period of time

- ....

46) Breaking rocks into small pieces

- ....

47) A river carries sediments meet a sea

- ....

Concept 4.2

48) To a flat land, if a water stream flows over it.

- ....

49) To a house that is built close to a river, if the path of the river is changed toward this house

- ....

50) To a small canyon if it rained a lot and water ran through it for a longer time

- ....

51) If a river erodes the sediments of a mountain over millions of years

- ....

52) If the speed of the river water that is full of sediments decreases

- ....

53) If wind that is carrying sand particles hits a big rock

- ....

54) To the sand in a desert when wind blows by a great force.

- ....

55) Rivers drain

- ....

56) The greater the water flow

- ....

57) The water was traveling down a steep slope

- ....

58) Rivers become slow movings

- ....

59) The flowing water does not enter still water

- ....

60) Erosion and deposition processes happen at the same time

- ....

Question 6 Write the scientific term each of the following

Concept 3.1

1)	It is a way to describe the energy flow that occurs when we use different devices.	( )
2)	The energy that comes in a device to be operated.	( )
3)	The main source of energy for most forms of energies on Earth	( )
4)	The energy used to play a drum.	( )
5)	The energy produced from batteries.	( )
6)	The energy stored inside a tree	( )
7)	The energy that is produced from a device and doesn't help it do its main function.	( )
8)	robotic vehicle designed to explore the surface of Mars	( )
9)	The source of energy in some toys that stores chemical energy	( )
10)	The energy produced when the wood of trees is burned	( )
11)	The energy produced from playing a guitar	( )
12)	The energy stored in coal	( )
13)	A form of energy produced from the electric lamp and affects our eyes	( )
14)	Energy can neither be created nor destroyed, but only converted from one form into another	( )
15)	The energy that is stored in both batteries and food	( )
16)	The energy that is produced from the electric power stations and flows through wires	( )

17)	A form of energy that is produced from the electric heater and burning coal.	( )
18)	It is any substance which produces thermal energy on burning	( )
19)	Natural resources of energy, that take a short period of time to be renewed	( )
20)	Natural resources of energy that take a very long period of time to be formed.	( )
21)	It is a form of biofuel that can be made from some types of plants such as grass and wood chips	( )
22)	They are fuels that were formed from remains of dead animals and plants under the Earth's surface	( )
23)	It is a form of fossil fuel that was formed from remains of dead plants under the effect of extreme heat and pressure	( )
24)	It is a form of fossil fuel that was formed from dead marine animals	( )
25)	The substance that is produced from the remains of dead trees that buried deep in the Earth over millions of years.	( )
26)	The clean energy resource that can be used in electric generation	( )
27)	The main energy resource that plants and animals need it to survive	( )
28)	Energy stored uphill water rivers	( )
29)	Energy that make turbines and generators in dams works	( )
30)	Energy that produced due to the operations of turbines and generators in dams.	( )
31)	A mill that is turned by water flow	( )

Concept 3.2

Concept 3.3

32)	A mill that is operated by wind movement	( )
33)	The type of energy that is produced from wind turbines to operate different home devices	( )
34)	An equipment that is used to convert the kinetic energy of wind into electrical energy	( )
35)	A type of mirrors that is used to collect and focus sunlight onto metal pots to heat them and cook the food inside	( )
36)	They help farmers in cold regions to plant crops which grow only in warm climate	( )
37)	An equipment consists of panels made of black pipes that is used to heat water at houses	( )
38)	A type of dams that is used to generate electricity using the flow of water	( )
39)	A turbine in which the kinetic energy of moving water is used to generate hydroelectric energy	( )
40)	A process in which water changes into water vapor	( )
41)	The process in which the water of rivers evaporates, then condenses forming clouds and return back to rivers through rainfalls	( )
42)	The process by which sediment down **Concept 4.1**	( )
43)	The disappearance of a sandcastle as a result of its hitting with the sea waves	( )
44)	Breaking apart rocks	( )
45)	They are deep valleys carved by flowing water.	( )
46)	Rocks that are found near seashores and broken by the effect of wind and water over long periods of time	( )

47)	A process in which rocks are broken down into smaller particles	( )
48)	A process in which small broken rocks move from a place to another by the help of wind or water.	( )
49)	A process in which the sediments are dropped in a new location by the action of wind, water and gravity	( )
50)	A part of plant grows inside cracks of rocks causing their weathering	( )
51)	The condition of atmosphere at a specific time and place	( )
52)	It is a type of weathering through which acids of lichens dissolve minerals of rocks	( )
53)	It is a type of caves that is formed when dissolved minerals of rocks combine again in new shapes	( )
54)	It is a process through which water forming ice in cracks of rocks	( )
55)	A gas in air combines with iron of some rocks and causes its weakness	( )
56)	A fan-shaped (triangular) mass of sediments that is formed where a river enters a larger body of water like seas	( )
57)	A hill of sand created by the wind.	( )
58)	They are small solid materials such as sand, soil and small rocks that carried by water to another place	( )
59)	The force that pulls down broken weathered rocks at mountainsides	( )
60)	It is a special type of valleys whose its sides are steep	( )
61)	It is the process by which the wind that carries rock particles and sand carves big rocks into different shapes.	( )

Concept 4.2

62)	The two processes that have the main role in the formation of canyon.	( )
63)	They are lowland areas in between mountains and have gently sloped sides around rivers	( )
64)	They are landforms which are made of windblown sand when something like rock blocks the wind.	( )
65)	Lowland areas in between mountains	( )
66)	Hills that are made of sand	( )
67)	Valleys are formed by	( )
68)	Very fine bits of sand, clay or rock materials	( )

Question 7 Correct the underlined words

Concept 3.1

1)	Energy can neither be created nor destroyed, but only converted from one form to another, this is the law of consuming of energy	( )
2)	The consumed energy while burning some pieces of wood is the thermal energy.	( )
3)	Light energy is stored inside the battery of a mobile phone	( )
4)	Toy cars depend on fuel as a source of electrical energy	( )
5)	Light energy, thermal energy and chemical energy are produced when a mobile phone is used	( )
6)	The solar energy produced from the moon can be converted into different forms of energy.	( )
7)	Curiosity is a robotic vehicle that is designed to explore the surface of moon.	( )

8)	Most of energy chains start with the moon	( )
9)	There is a stored thermal energy inside the food we eat	( )
10)	The input energy in a hair dryer is the chemical energy	( )
11)	Coal is the main source of most energies on the Earth's surface	( )
12)	Fuel is the substance that produces electrical energy on burning	( )
13)	We have to increase planting vegetables and fruits that need a large amount of water (Concept 3.2)	( )
14)	In houses, gasoline is used in cooking food as it is one of the oldest known biofuels.	( )
15)	The moon is the main source of both biofuel and fossil fuel	( )
16)	We can use some animals to make a liquid biofuel	( )
17)	The rate of usage of fossil fuels must be increased	( )
18)	Wood is a form of fossil fuels that can be used in houses	( )
19)	Water is a nonrenewable resource of energy that can be used as a fuel in cooking food and moving cars.	( )
20)	We can conserve oil by increasing the use of private vehicles	( )
21)	Solar panels use sound energy to generate electricity	( )
22)	Water turbines generate electricity by using the energy of wind movement	( )
23)	Manual mixer depends on electricity to do its function	( )

24)	In the absence of the light of moon, living organisms cannot survive (Concept 3.3)	( )
25)	Thermal energy and sound energy are produced from the Sun and reach the Earth	( )
26)	Small solar panels are used to supply one light bulb with sound energy.	( )
27)	Potential energy of the wind is converted into electrical energy by wind turbines	( )
28)	The difference in temperatures between cold and hot air causes air to stop	( )
29)	Water turbines rotate when their blades rotate as wind blows.	( )
30)	When air blows into the wind turbine strongly, the blades spin slower	( )
31)	The thermal energy generated by water turbines in dams is known as hydroelectricity	( )
32)	During the flowing of rivers water downhill, the chemical potential energy of water is converted into kinetic energy	( )
33)	Dams are built on rivers in order to generate solar energy	( )
34)	The electrical energy is generated by wind turbines in dams	( )
35)	The deep valley that is carved by flowing water, is known as coastal rock (Concept 4.1)	( )
36)	Disappearance of a sandcastle in few minutes is an example of slow changes.	( )
37)	Canyons are formed due to fast changes	( )
38)	The movement of sediments from one place to another, is know as deposition	( )

39)	Weather is the breaking down of rocks on Earth's surface into tiny pieces	( )
40)	Plant leaves grow inside the cracks of rocks which become wider	( )
41)	Weathering process followed by deposition process in reshaping Earth's surface.	( )
42)	Sand grains can be carried for a short distance by strong wind	( )
43)	When sediments are deposited at the end of a river, a sand dune is formed	( )
44)	Hills of sand which are found in deserts and seashores are known as canyons	( )
45)	Erosion process means that wind or water break down rocks	( )
46)	Erosion process is usually followed by weathering process	( )
47)	Deltas are formed by weathering process	( )
48)	Dunes are lowland areas which have gently sloped sides	( )
49)	Small canyons are formed due to the flowing of wind through a desert	( )
50)	Big streams cause more deposition than small streams	( )
51)	Nile River Delta has a rectangular shape.	( )
52)	Limestone caves are formed due to the combination of red-colored rust.	( )
53)	When the water of a river travels down hill on a steep slope, its speed will decrease	( )

Concept 4.2

Question 8 Vairous questions

Concept 3.1

1] Use the following words to complete the energy chains below. (You may use the same word more than once).

(Thermal - Chemical - Kinetic - Electrical - Sound - Light)

(1) The energy chain of burning some branches of a tree :

Solar energy (From the Sun) → Converted into → (..........) energy (Stored inside the tree) → Converted into → (......) energy and (......) energy (When burning the wood of branches)

(2) The energy chain to operate electric blender

Solar energy (From the Sun) → Converted into → (......) energy (Stored inside the coal from the remains of dead → Converted into → (......) energy and (......) energy (in electric power stations) → Converted into → (......) energy (Transferred in electric wires) → Converted into → (......energy And(......)energy

2] Put each of the following words in front of the suitable sentence

[The Sun-Wood - Gasoline - Thermal energy]

(1) It is a form of fuel that is used in different means of transportation (......)

(2) It is a form of fuel that is used in warming houses. (......)

(3) It is a form of energy which is produced from burning fuel (......)

(4) The main source of most energies on the Earth's surface. (......)

3] Compare between biofuels and fossil fuels (the type of energy resources) , (definition) , (examples of each of them)

	Biofuels	fossil fuels
the type of energy resources	......	......
definition	......	......
examples of each of them	......	......

4] Show the energy chain in hair dryer

Light energy (From the sun) → Converted into → Chemical energy (stored inside coal formed from the remains of dead tress) → Converted into → Thermal energy and kinetic energy → Converted into → Electrical energy (Goes through electric wires) → Converted into → Thermal energy, kinetic energy and sound energy (In the hair dryer)

Concept 3.3

5] Determine the important of greenhouse

- ....

6] Determine the output and input in greenhouse

- ....

7] Determine the output and input in solar panels system

- ....

8] Determine the input and output energies in turbines and generators inside the dams

- ....

9] Determine the input and output energies in windmills

- ....



10) Determine the output and input energies in watermills

- ....

11) Complete the following energy chain by using the energies below

- (You may use each word more than once).

(Thermal - Electrical - Kinetic)

Burning of coal produces (......) energy

→ Converted into →

(......) energy to move the machines of electric power stations

Wind blowing produces (......) energy that moves the turbines of wind turbines.

→ Converted into →

(......)energy that travels through wires to houses.

→ To operate →

Television

لو لسه بتدور على قناة تساعدك تفهم بدل ما تحفظ؟
يبقى لازم تشوف (قناة النخبة التعليمية).
اشترك دلوقتي وابدأ تتعلم بأسلوب مختلف: سهل، ممتع، وفعّال.
خلي هدفك واضح، وخلي النخبة طريقك."

12) Complete the following sentences using the words below :

(increases - solar cells - wind - wires)

1- Solar panels are composed of many small........................
2- The efficiency of wind turbines increases, when the kinetic energy of wind......(......)
3- The electrical energy produced by wind turbine, is transmitted through big............to different houses
4- difference in temperatures of air causes the blowing of... ....

13) Complete the following energy chain of a fan using the words between brackets: (You may use the same word more than once).

(Thermal - Radiant - Electrical - Kinetic - Sound)

1......(......)... energy — From the sun

Converted into

2......(......)......energy — Causing temperatures vary between hot and cold air

Converted into

In wind turbines: 3......(......)......energy.

Converted into

4......(......).... energy — Carried by electric wires

Converted into

5.........(......).... energy to do the main function of the fanz
6. ...(......) and (......) energies as wasted energies in the fan

14) Determine the two factors that effect the Earth's surface

- ....

15) Determine the difference between weathering and erosion.

- ....
....



16] Complete the following sentences by using the words between brackets

(slow - erosion - fast-rocks - wind - water)

1. The shape of coastal rocks is affected by the forces of...(......) .and wind
2. The origin of sand is the breaking down of some types of......(......) ..
3. Air moving from an area to another and has a role in breaking down of rocks into smaller particles is known as ......(......).......
4. The process of transporting small rocks from one place to another by the help of water or wind is known as........ ......).........
5. Disappearance of a sandcastle is an example of...(......)...changes, while formation of a canyon is an example of......(......)......changes

17] Complete the following sentences by using the words between brackets:

(gravity - sand dunes - delta - deposition – weathering)

1- Wind in the desert may form...... ....
2- When a river meets a sea......... ....will be formed
3- Erosion by......... ....pulling small rocks down at mountainsides
4- The reshaping of the Earth's surface starts by...... ....process followed by erosion process and then ....process

18] Mention how does the wind affect the sand?

- ....
- ....

19] Mention how does sand dunes form

- ....

20] Mention how does the delta form

- ....

21] Compare between canyon ans valley (in terms of formation ,similarities and differences)

Canyons	Similarities	Valleys
•	•	• ....
•	•	• ....
•	•	• ....
•	•	• ....

مراجعات النـــخبة

بنك الأسئلة

Science Final Review 2025

Science
Answer form



Trust Academy Online

Primary 4th

Second Term 2025

Prepared by:

Teacher. Salma Gharib

Mrs/Menna Hussein

SCAN ME

Question 1 choose the correct answer

Concept 3.1

1. In the battery of a toy car...........energy is converted into electrical energy

(a) Chemical (b) Sound
(c) Light (d) thermal

2. Plants can convert the light energy from the Sun into........ energy which is stored in the plant in the form of sugar.

(a) Sound (b) Electrical
(c) Chemical (d) kinetic

3. Electric wires are made of

(a) Copper (b) Paper
(c) Wood (d) glass

4. Some kinetic energy is converted into.......... energy due to friction of bike's tire with the road.

(a) Light (b) Electrical
(c) Potential (d) thermal

5. When you use the hand bell, the......... energy is converted into sound energy

(a) Light (b) Thermal
(c) Kinetic (d) electric

6. When a piece of coal is burned,........... energy is produced.

(a) Thermal (b) Solar
(c) Sound (d) potential

7. The......... on the rover Curiosity convert solar energy into............. energy which is used to charge its batteries.

(a) solar panels – electrical (b) batteries electrical
(c) solar panels – sound (d) batteries sound

8. The input energy in the fridge is ....energy

(a) Electrical (b) Sound
(c) Chemical (d) thermal

9. The spring of a spring toy car convert........... energy into .... energy

(a) chemical – electrical (b) Kinetic - chemical
(c) Electrical - chemical (d) Potential - kinetic

10. As energy transforms from one form to another, some of it is often lost as

(a) Light (b) Heat
(c) Sound (d) movement

11. The Curiosity Rover is operated with.............. energy
(a) Sound (b) Solar
(c) Kinetic (d) thermal

Concept 3.2

12. On burning fuel, we obtain...........
(a) sound energy. (b) potential energy
(c) electrical energy (d) thermal energy

13. Car engines can be operated by...............
(a) coal only. (b) coal and wood.
(c) gasoline only (d) gasoline and natural gas

14. The two main types of fuel are....
(a) wood and coal (b) water and wind
(c) the Sun and the moon (d) fossil fuels and biofuels.

15. Smog causes irritation of ....of humans
(a) stomach and eyes (b) eyes and lungs
(c) small intestine (d) large intestine

أنت أقوى مما تتخيل ..
آمن بقدراتك !



16. Smog contains tiny particles that...........
(a) damage the human respiratory system
(b) damage the human digestive system
(c) help the human body grow up
(d) keep the human body healthy

17. Acid rain is formed when .... combines with rain water
(a) oxygen gas (b) carbon dioxide gas
(c) Dust (d) sand

18. All the following are harmful effects of acid rain, except.......
(a) global warming
(b) death of trees
(c) change in the chemical nature of lakes.
(d) change in the chemical nature of the soil

Concept 3.3

19. All of the following are examples of renewable energy resources, except......
(a) fossil fuel (b) waterfalls
(c) wind (d) sunlight

20. The wind movement has............energy which moves the blades of windmills
(a) Kinetic (b) Solar
(c) Thermal (d) potential

21. Both modern wind turbines and modern water turbines are similar in their.........

(a) Shape (b) ability to generate electrical energy.

(c) blades number (d) ability to generate potential energy



22. Greenhouses allow farmers to plant crops that only grow in...................

(a) polar climate (b) warm climate.

(c) absence of sunlight (d) absence of water

23. Solar water heater changes................ energy into ....energy

(a) electrical- thermal (b) solar-sound

(c) electrical sound (d) solar thermal

24. The reason of flowing of river water downhill is the........ force

(a) Pushing (b) Friction

(c) Gravitational (d) electrical

25. Using of water to generate electricity depends on places ....

(a) with strong winds (b) where dams are built on rivers.

(c) with weak winds (d) where boats sail in rivers

26. The water behind a dam stores ....energy

(a) Kinetic (b) Thermal

(c) Potential (d) electrical

27. The form of energy resulted from waterfalls is called .... energy

(a) Thermal (b) Chemical

(c) Solar (d) hydroelectric

28. River water evaporates by the help of heat produced from...........

(a) Kettles (b) the Sun

(c) electric heaters (d) electric iron

29. In the water cycle, the water evaporates, then it condenses in form of .... and returns back through rain falling

(a) Clouds (b) Sand

(c) Rocks (d) coal

30. Sand is formed due to breaking down of.............

Concept 4.1

(a) Glass (b) Wood

(c) Rocks (d) plastic

31. The deep narrow valley with slopes at its sides and often with water stream flowing through it is known as a……………………

(a) Canyon (b) Mountain

(c) Hill (d) river

32. The condition of atmosphere including temperature, wind and rains is known as…………

(a) Weather (b) Weathering

(c) Erosion (d) deposition



33. The dropping of sediments in a new place, is known as

(a) Weathering (b) Deposition

(c) Freezing (d) erosion

34. Limestone caves are formed due to the combination of

(a) dissolved minerals (b) red-colored rusts

(c) living organisms. (d) acid rains

35. Lichens produce ……..on rocks that dissolve minerals found in these rocks

(a) Oxygen (b) Acids

(c) Water (d) rain

36. Water can cause ………..that affect(s) the shape of the Earth

(a) mechanical weathering only

(b) chemical weathering only

(c) both mechanical and chemical weathering

(d) neither mechanical nor chemical weathering

37. Which of the following arrangements is correct about reshaping Earth's surface ……..

(a) Erosion → Weathering → Deposition

(b) Erosion→ Deposition → Weathering

(c) Deposition → Erosion → Weathering

(d) Weathering → Erosion → Deposition



38. Gentle wind can carry…………….. for a short distance

(a) a large rock

(b) sand grains

(c) a large body of water

(d) a big mass of mud

39. When a river that carries sediments meet a sea,…………. is formed

(a) a large mountain (b) a triangle-shaped delta

(c) small sand dune (d) a large sand dune

Concept 4.2

40. When a rock blocks the paths of flying sand, a .... may be formed

(a) canyon (b) Dune

(c) River (d) valley

41. A canyon may be formed due to the effect of............

(a) erosion and deposition (b) weathering and erosion

(c) weathering and deposition (d) deposition only

42. Walls of canyons are characterized by all the following, except that they

(a) are very high. (b) are gently sloped

(c) have great depth (d) consist of many rocks layers

43. The delta is formed when the river stream entering all of the following, except

(a) a lake (b) a mountain

(c) a sea (d) an ocean

44. Nile River Delta is characterized by the presence of ....that allows the planting of different types of crops

(a) Mountains (b) fertile soil

(c) sand dunes (d) polluted soil

45. Among canyons which have V-shape are

(a) Wadi Nakhr and the Small Canyon

(b) the Small Canyon and the Colored Canyon.

(c) the Colored Canyon and Wadi Rum

(d) Wadi Nakhr and Wadi Rum

Question 2

Put (✓) or (×) answers

Concept 3.1

1)	The spacecraft takes a bout five months, usually longer to reaches to mars.	✓
2)	The cars toy need a source of energy	✓
3)	The energy stored in soap dispenser is potential energy	✓
4)	The energy produces from sun is light energy only	×
5)	Light energy is produced only by electrical bulbs	×

6)	The stored energy in the spring is kinetic energy	✗
7)	Energy cannot be created nor destroyed	✓
8)	In electrical iron, electric energy converts into thermal one	✓
9)	In cell phone, electric energy stored in battery	✗
10)	The primary and main source of fuels is moon	✗
11)	Coals are from renewable fuels	✗
12)	Biofuels are renewable fuels	✓
13)	Liquid fuels were formed from the remains of plants and animals that lived millions years	✗
14)	Coal is used in cooking food	✓
15)	Cars and trucks don't need fuels to move	✗
16)	The primary and main source of fuels is wind	✗
17)	Fossil fuels are from renewable sources of energy	✗
18)	Natural gas is used in cooking food	✓
19)	Wind is non-renewable resource of energy	✗
20)	Electricity has an important role in our life	✓
21)	Fossil fuels can be used only in generating electricity	✗

22)	Fossil fuels are important in generating electricity	✓
23)	Coal is only fossil fuels	✗
24)	Water is from nonrenewable energy resources	✓
25)	Nitrogen is the cause of global warming	✗
26)	Oxygen gas is formed by burning of fossil fuels	✗
27)	Fossil fuels have negative impacts on the environment	✓
28)	Oxygen combines with water vapour in the atmosphere and forms acidic rains	✗
29)	Wind is non-renewable resources of energy	✗
30)	In greenhouse the radiant energy from sun convert to electric energy	✗
31)	The concave mirror is used in collecting and focusing sunlight	✓
32)	Kinetic energy can be used in electric generation	✓
33)	The input of the solar panels system is electric energy	✗
34)	Sun light known as radiant energy or radiation	✓
35)	Canyon formed at a short period of time	✗
36)	The process of deposition occurs when sediment down	✓
37)	Wind causes beach erosion	✓

Concept 3.3

Concept 4.1

38)	Wabi Nakhr in the country of Oman	✓
39)	Erosion and weathering change the shape of Earth's surface	✓
40)	Both of sandcastles and canyons can be formed in few hours	×
41)	There are some similarities between sandcastles and coastal rocks	✓
42)	Water may cause mechanical and chemical weathering	✓
43)	Chemical weathering could occur due to the acid that is produced from lichens or present in some rains.	✓
44)	Limestone caves are formed due to friction between sand and rocks	×
45)	Crushing a piece of biscuit by hands can represent a type of chemical weathering	×
46)	Limestone caves formed withen few hours	×
47)	You can see the reshaping of Earth's surface during its occurrence	×
48)	If there is no erosion process, there is no deposition process in another place	✓
49)	Erosion and deposition are two linked processes	✓
50)	The Colored Canyon in Sinai is formed due to erosion by water for a short period of time	×
51)	There are no trees or plants grow on the both sides of a canyon at the beginning of its formation	×
52)	The walls of canyons may be eroded by the effect of a river movement	✓
53)	Big streams cause more erosion than small streams.	✓

Concept 4.2

54)	All canyons have the same shape	✗
55)	Canyons differ in colors and texture of rocks	✓
56)	Dunes are special type of valleys which is formed due to wind erosion	✗
57)	Deltas may contain fertile soil which is suitable for cultivating many crops	✓
58)	Canyons are similar to each other	✗
59)	Plants on both sides of the canyons indicate the presence of water	✓
60)	Colored canyon is found in Sinai	✓
61)	Canyon is formed due to weathering and deposition	✗
62)	The more water flows , the more erosion	✓
63)	There are a lines in some canyons.	✓
64)	As rivers drain, they create a variety of different landforms	✓
65)	Grand Canyon is landform in South America	✗
66)	The grand canyon is the largest canyon in the world	✓
67)	Gravity pulls rainwater downhill	✓
68)	Deltas are not formed by erosion	✓
69)	Wind and sand work together as forces of erosion and osition	✓

70)	Valleys and canyons are formed by erosion	✓
71)	The Nile River Delta was formed as a result of the rapid flow of the Nile River	✓
72)	The Nile River Delta is square in shape	×
73)	The Nile River Delta is the famous delta in the world	✓
74)	Deltas are formed by weathering	×
75)	Silt is made of very fine bits of sand, clay or rock materials	✓
76)	Most delta form where flowing water enters still water	✓
77)	Sand dunes are hills that are made of sand	✓

Question 3 Complete the following sentences

Concept 3.1

1)	The idea of designing the Mars Rover depends on the idea of transforming (Solar) energy into (Kinetic) energy
2)	Batteries which put inside the toy is considered as (energy source)
3)	The missions of mars depend on (vehicles) and(robots)
4)	The main source of energy in the Earth surface is(The sun)
5)	The energy produced by hair dryer are (Thermal energy) and (kinetic energy)
6)	The car which operated by a spring (Potential)energy converts into (kinetic) energy



7)	When you eat breakfast, (chemical) energy stored from food
8)	The energy source in the toy car is the (Battery)
9)	The energy can be (converted) from one form to another
10)	Remote controlled toy car converts (chemical) energy stored in its batteries into (electrical) energy that is converted into (kinetic) energy which is used to move the car
11)	When your cell phone is out of charge, you must recharge its (battery) to operate it again
12)	Some calculators can change solar energy into (electrical) energy by using the sunlight
13)	On planet Mars, Curiosity robot is operated by using (solar) energy from sunlight that is converted into (electrical) energy used to recharge its batteries
14)	The energies that are produced from the washing machine are (kinetic) energy and (sound) energy
15)	(Coal) is produced from the remains of dead trees buried in Earth over millions of years
16)	When you press on the soap dispenser,(potential) energy stored in its spring is converted into (Kinetic) energy that moves the soap upward
17)	In any energy chain, some of the energy is wasted in the form of(heat)
18)	The light energy from the Sun is converted and stored inside plants in the form(chemical)energy
19)	Energy can neither be (Created) nor (destroyed) but only (converted) from one form to another
20)	The kinetic energy in a hand bell is considered as(input)energy, while in an electric fan is considered as (output)energy

Concept 3.2

21)	Gasoline is burned inside a car engine to produce (thermal) energy that is converted into (kinetic) energy which causes the movement of the car
22)	Some forms of fuel can be used in cooking such as(coal) , (natural gas) and (wood)
23)	We can use some forms of fuel in warming houses such as(coal) And (wood)
24)	Water is considered from (renewable) resources of energy, while coal and (natural gas) are from nonrenewable resources of energy
25)	The natural resources that can be replaced shortly after being used are called (renewable) resources of energy
26)	The natural resources that are consumed at a rate faster than they can be renewed are called(nonrenewable) resources of energy
27)	Different forms of fuel can be classified into two main types which are(biofuels) and (fossil fuels)
28)	The type of fuel that is produced from living organisms that can be planted is called(biofuel).such as wood and (charcoal)
29)	Wood and (charcoal) are examples of biofuel, while(oil)and(coal)are examples of fossil fuel
30)	Wood chips and grass can be used to make a (liquid) biofuel.
31)	Oil formed from the decomposition of (sea creatures) and as a result of extreme heat and (pressure)
32)	The energy comes from a power plant comes through burned(Coal) and (Natural gas)
33)	From the type of fuels are (Coal - Natural gas – wood)
34)	Cars and trucks need (Fuel)to move
35)	The fuels is used in (Warming our houses) (Supply cars with energy to move)

36)	Fuels are (any substances that produce thermal energy when they're burned
37)	(grass) and (wood chips) can be used to make a liquid fuels
38)	Biofuels can be produced by (living organisms) , (plants)
39)	The primary and main source of fuels is (sun)
40)	Examples of fossil fuels (Oil) and (natural gas)
41)	(Bio fuels)is from renewable fuels
42)	(Coal)and (natural gas) are from non-renewable sources of
43)	By burning fuels (Thermal energy) is released
44)	The remains of plants and animals turned into coal by (Heat) and (pressure) of Earth
45)	(Deforestation) has a variety of negative impacts on environment
46)	In electric power station, we use fossil fuels such as oil and natural gas which are considered as (nonrenewable) resources of energy
47)	Water is considered as (renewable)resource of energy, and we can use it to generate (electricity)
48)	When fuel is burned in an electric power station, it produces (thermal) energy to heat water
49)	Generators in electric power stations change (kinetic)energy into (electrical)energy
50)	During generating electricity in electric power stations, the hot water produces (steam) which is used to turn turbines



Concept 3.3

51)	Turbines in electric power stations are turned by steam to produce (kinetic) energy required to operate the (generators)of the electric power stations
52)	Inside electric power stations, the burning of fuel produces (thermal)energy while the movement of turbines produces (kinetic) energy
53)	Some mills used (wind) and other used (water)
54)	From the renewable energy resources (water turbines , wind turbines)
55)	The output of the solar panels system is (Electrical) energy
56)	Energy received from the sun is called (solar energy)
57)	Solar panels are used to (Generate electricity)
58)	The water can be heated by passing through (BlacK) colour tubes
59)	Sun is a (Renewable) energy resource.
60)	(wind mill And water mill) is used to crush grain to make flour
61)	All plants and animals need (sun) to survive
62)	(Concave (curved) mirrors is used in collecting and focusing sunlight
63)	In greenhouses radiant energy from the sun convert to (thermal) energy
64)	Wind is(Renewable) energy resources.
65)	The input of the solar panels system is (Radiant) energy
66)	Water can be used to (Generate electricity)

67)	Electricity that formed by water is called (Hydroelectric energy)
68)	The water from the rivers above the dam stores (Gravitational potential)
69)	Water is (Renewable) energy resources
70)	Wind can be used to (Generate electricity)
71)	The gravitational potential energy of rivers water convert to (kinetic) energy
72)	The (Water turbines) in the dam generate electricity
73)	Water from (Rivers) is used in electricity generation
74)	Wind is a (Renewable) energy resource
75)	The water flow has kinetic energy, which moves the ....blades ....of water turbines to transform this energy into ......electrical ....energy
76)	Both ......wind mills......and ...water mills......are used to crush grain hundreds of years ago
77)	When we expose our bodies to the Sun, we feel......warm......
78)	We can use solar energy in cooking by using ......concave mirrors....which collect and focus ....sunlight ... onto metal pots to heat them
79)	Greenhouses convert the radiant energy of the sun rays into ......thermal ......energy that allows farmers to plant crops which grow in ......warm........climates
80)	In some villages, solar panels are used to generate ......electrical .... energy that is used to operate ......irrigation .... equipments
81)	Wind is formed due to the effect of ....radiant ...energy coming from the ......sun.... in the form of rays



82)	Wind blows due to the difference in ......temperatures........ between the cold air and the hot air.
83)	When the....... kinetic .....energy of wind increases, the speed of rotation of turbine blades will ....increase.......
84)	When rivers flow downhill,...... gravitational potential.... energy of water is converted into ...kinetic ..... energy that rotates water turbine
85)	The type of electrical energy which is produced by water turbines is called ...hydroelectric energy.....
86)	Renewable energy resources include...The sun,...wind ......and ...water... ...
87)	Clouds are formed due to the......evaporation ...then ...Condensation ...... of water of rivers and seas.
88)	In water turbines, the......kinetic .....energy of water movement is converted into a type of electrical energy which is called .... hydroelectric.....energy
89)	Wadi Nakhr located in the country of (oman)
90)	Canyon is formed by (flowing water)
91)	The process by which rocks are broken into smaller pieces is known as (Weathering)
92)	The process by which rocks or soil moving is known as (Erosion)
93)	Sediment down is a process of (Deposition)
94)	Canyon is formed after (long period of time)
95)	Some changes to Earth's surface happen take (long) time and some take (Short) time
96)	Coastal rocks are formed by a (long) period of time
97)	(Erosion) ...moving soil from one place to another

Concept 4.1



98)	(Sea waves) causing beach erosion
99)	The type of weathering in which the rocks are broken down due to plant roots is known as ...... Mechanical ......weathering
100)	The type of weathering in which the structure of rocks changes due to chemical reactions is known as ...... Chemical ....weathering
101)	Some tiny plant-like organisms produce ...... acids ... that can dissolve minerals of rocks causing their breaking down
102)	Lichens produce acids on rocks that dissolves their ... minerals ....
103)	Mechanical weathering takes place when ...... friction .....occurs between sand carried by wind and rocks
104)	Flowing water which carries small gravel and sand may break down large... rocks .. and cause ... Mechanical .... weathering
105)	The cracks caused by freezing of water and melting of ice represent ......Mechanical...... weathering
106)	Sand grains fall on the ground when the ......Wind ...... carrying it stops.
107)	Strong wind and hurricanes carry ......Sand grains...... for a long distance
108)	Gentle winds can form small ......Sand dunes...... like that present at sea beaches
109)	Putting some biscuits in a cup of water that contains antacid is like the ......Chemical...... weathering of rocks
110)	Wind, (water)and gravity are natural factors that control erosion process Concept 4.2
111)	Sand grains fall on the ground when the (wind)carrying it stops.
112)	Sediments are moved by the effect of (wind) and (water)then settles on the surface of land or the bottom of water

113)	Blowing of strong (wind)in the desert may form large sand dunes
114)	Strong wind and hurricanes carry (sand grains)for a long distance
115)	Gentle winds can form small (sand dunes)like that present at sea beaches
116)	Water and wind are factors that cause (weathering) (erosion) (deposition)
117)	Canyon is formed by (weathering) and (erosion) processes
118)	Canyon is formed at (millions) of years
119)	Colored canyon found in (Sinai) , (Egypt)
120)	Canyons are differ for each other in (shape and size)
121)	The sides of canyons are (steep)
122)	Plants on both sides of the canyons indicate the presence of (water)
123)	Wadi Nakhr is found in (Oman)
124)	Canyons may differ of each other in (shape and size)
125)	Canyon may formed by weathering and erosion with the effect of (water) and (wind)
126)	The erosion and deposition can lead to formation of some new of (landforms)
127)	The greater the water flow greater the (Erosion)
128)	A Canyon is a type of (Valley)

129)	The valley formed depends upon several factors (The type of rocks) and (river water speed)
130)	The formation of canyons take place during (Millions) years
131)	Fast moving rivers can cause a lot of (Erosion)
132)	Grand canyon is a landform in (United States of America (USA)
133)	()pulls rain water downhill (Gravity)
134)	Valleys can be formed by (Water) or (Wind)
135)	Canyon walls are (Steep)
136)	(Bif streams)or rivers produce greater change
137)	Grand canyon is a (land form)in North America
138)	From an examples of canyon are (rand Canyon) and (Colored Canyon)
139)	(Nile river Delta) is the most famous delta in the world.
140)	The delta is characterized by the presence of (fertile soil)
141)	Nile River Delta lies between.(Cario) and (Northern coast of Egypt)
142)	The river water is full of (sediments)
143)	Some landforms are created by (water) and (wind)
144)	Wind and sand work together to (Carve) rocks

145]	Deltas are formed by (depostition of silt)
146]	Wind and sand work together as forces of (erosion) and (depostiton)
147]	The Nile River (is triangle) in shape
148]	Dunes can be (hundreds) of meters tall
149]	Canyons are formed by (rivers or streams)
150]	Valleys are formed by (rivers and streams)
151]	Deltas are formed by (deposition of silt in river)

Question 4 Give reason

Concept 3.1

1] The energy can change its forms but it never goes away
- Because law of conservation state that energy cannot Create or destroy but can change from form to another

2] You fell heat when you hold your hand near to light bulb
- Because some of the electrical energy is also converted into thermal energy

3] When you push on the bike pedals with your legs , heat energy is produced
- Because some of the kinetic energy is converted into thermal energy due to the friction between road and the tires

4] There is a change in energy when burning wood
- Because the chemical energy stored in wood is converted into thermal energy and light energy

5] The body has energy inside it
- Because The body has chemical energy that stored in food which is converted into kinetic energy when we move

6] Not all the energy that enters the energy chain completely reaches the device.
- Because some of the energy is wasted in the form of heat.

7) A remote-controlled toy car needs a battery to move from one place to another

- Because the chemical energy stored in battery is converted into electrical energy that changes into kinetic energy that makes the car move.

8) There is an energy change when you press the spring of a soap dispenser

- Because the potential energy stored in its spring is converted into kinetic energy that moves the soap upward

9) When you rub your hands together, you feel warm

- Because the kinetic energy is converted into thermal energy

10) You feel heat, when you put your hands near a lighted electric lamp.

- Because some of the electrical energy is converted into thermal energy.

11) The electrical energy that enters the hair dryer does not come out of the hair dryer in the same form of energy.

- Because the electrical energy is converted into kinetic, thermal and sound energies

12) Sometimes the fuel indicator of a car goes down

- Because the fuel in the car tank runs out.

13) Some calculators use the sunlight to operate.

- Because the energy of sunlight (solar energy) is converted into electrical energy which operate the calculators

14) The fuel is very important for different means of transportation.

- Because fuel is burned inside the engines to produce thermal energy that is changed into kinetic energy which causes the different means of transportation to move.

15) Thermal energy in a mobile phone is considered as a wasted energy.

- Because it doesn't help the mobile phone to do its main function.

Concept 3.2

16) Generators are important in electric power stations

- Because generators convert kinetic energy into electrical energy.

17) We must turn off lights that we do not need.

- To conserve the electricity

18) Smog of cars is very dangerous to human health.

- Because the smog of cars causes irritation of human's eyes and lungs

19) Farmers must decrease the use of pesticides

- Because pesticides cause the pollution of soil and water.

20) Increase the burning of fossil fuel causes acid rain.

- Because burning fossil fuel produces carbon dioxide gas which combines with water in air forming acid rain.

21] Global warming occurs due to the increase of burning coal and oil.

- Because burning coal and oil produces carbon dioxide gas which forms a layer in atmosphere that traps heat on Earth causing rise in Earth's temperature that causes global warming

22] To keep the air clean, we must replace fossil fuels with renewable resources of energy.

- Because when fossil fuels are burned, they release gases that cause air pollution

23] Fossil fuels are non-renewable sources of energy

- Because they are used faster than they can be renewed



24] Biofuels are renewable sources of energy

- Because it can be replaced soon after it is used

25] Sun is renewable source of energy

- Because it (solar energy) can be replaced soon after it is used

26] Using wood of trees as a fuel has negative effects on the environment.

- Because continuity of cutting down trees leads to deforestation

27] Coal and gasoline are considered as nonrenewable resources of energy.

- Because they are used faster than they can be renewed.

28] Gasoline is burned inside a car engine

- To produce thermal energy which changes into kinetic energy that causes the car to move

29] Mars rover Curiosity operates for a long period of time on Mars without any need to be recharged.

- Due to the presence of solar panels that converts the solar energy into electrical energy which recharge its batteries.

Concept 3.3

30] Sun is very important to plants and animals.

- Because it is the main energy resource that animals and plants need to survive

31] The solar energy is clear energy resource

- Because it is a renewable energy resources and it doesn't pollute the environment

32] The concave mirror can be used in cooking

- Because These curved mirrors collect and focus sunlight (sun rays) to heat metal pots and cook food inside it

33] Turbines and generators in dams have important role

- Because they convert kinetic energy of water into electrical energy

34) The renewable energy resources are very important

- Because we can use them in generating electricity And Because they don't pollute the environment (clean energy resource)

35) Dams have important role in electricity generation

- Because water of dams stores gravitational potential energy that changed into kinetic energy that operate water turbines and generators which generate electricity

36) Humans used windmills and watermills from hundreds of years ago

- Because they helped them to crush grain to make flour

37) Sometimes the Sun is not visible in the sky but you can feel its warmth

- Because the atmosphere, land and water of Earth absorb the thermal energy of the Sun which causes increasing in the Earth's temperature

38) Farmers use greenhouses to plant crops which grow only in warm climate

- Because greenhouses absorb radiant energy coming from the Sun and convert it into thermal energy that warms the inside of greenhouses

39) Some electrical devices have solar panels which are composed of many solar cells

- To absorb the solar energy coming from the Sun and convert it into electrical energy

40) Kinetic energy of wind affects the speed of wind turbine blades rotation.

- Because by increasing the kinetic energy of wind, the blades rotate faster and wind turbine generates more electricity.

41) Sometimes the wind turbines are useless

- Because sometimes the wind doesn't blow, so their blades don't move, so wind turbines don't generate electricity

42) Hydroelectric dams are built on rivers

- To control the water flow and increase the potential energy of water to generate electricity

Concept 4.1

43) Formation of canyons is considered as an example of slow changes

- Because they are formed due to the slow changes that happened to their rocks over many years.

44) Iron in rocks may rust.

- Due to the reaction between iron and oxygen of air

45) Water plays an important role in the formation of limestone caves

- Because water dissolves minerals in rocks, then these dissolved minerals combine again forming new shapes

46) Formation of a delta when a river meets a sea.

- Because the sediments are deposited at the end of the river

47) Formation of small sand dunes on a beach

- Because they are formed by the effect of weak winds

48) Formation of large sand dunes at Western Desert in Egypt

- Because they are formed by the effect of strong winds

49) There are the relation between erosion and weathering

- Because weathering is the breaking down of rocks into smaller particles and then erosion process start moving these particles to another place

Concept 4.2

50) Trees and other plants are growing on both sides of small canyons

- Due to flow of water stream which is needed by plants to grow.

51) It might be useful to recognize signs of weathering, erosion and deposition

- Because it may help in building houses in safe places

52) The sides of canyon at the beginning of its formation are gently sloped

- Due to the help of water in eroding the sides down.

53) Valleys have different shapes

- Because the shape of a valley depends on several factors including:
- The types of rocks exist in the landscape
- The speed, age and size of river that form the valley

54) Canyon may be formed as a result of river streaming

- Because the fast flow of water can erode a lot of sediment and carry them away, that lead to a formation of canyons

55) Plants of wetland areas help in formation of deltas

- Because they help in increasing the rate of deposition process

56) A sand dune may be formed in front a large rock in desert

- Because the large rock can block the path of sand which is carried by wind

57) Gravity has an important role in the formation of canyon

- Because gravity causes rainwater to flow downhill, forming streams that erode the land and carve out canyons

58) . Canyon does not form quickly

- Because it takes millions of years to be formed

59) . Rainwater downhill

- Because gravity pulls rainwater downhill forming small streams

60] Deposition is very important process in agriculture

- Because deposition forming delta that is a fertile soil allow planting different crops

61] The Nile River Delta is a suitable place for agriculture

- Because it's a fertile soil that allow planting crops

62] The Nile River Delta is the most famous delta in the world

- Because it's charechterized by fertile soil that allow planting different crops

Question 5 What happens ?

Concept 3.1

1] If batteries of remote-controlled toy car run out.

- The car will not move, so we can recharge its batteries by connecting toy car to a nearby charger or replacing old batteries with new ones

2] To the car fuel indicator if the amount of gasoline in a car decreases.

- The car fuel indicator will go down.

3] To the change of energy when you burn a piece of wood.

- The chemical energy is converted into thermal energy and light energy

4] If solar calculators were exposed to the sunlight.

- Solar energy is converted into electrical energy that operate them.

5] If you put your hands near the lighted lamp

- I feel warm, because some electrical energy is converted into thermal energy.

6] If you use a mobile phone for a long time. (according to the wasted energy).

- Some energy is wasted as thermal energy



7] To the car movement if fuel runs out in a car

- The car movement decreases gradually until it stops.

8] If Mars rover Curiosity didn't get any sunlight on Mars surface.

- It cannot be operated, because it depends on sunlight (solar energy) to recharge its batteries.

9] If you turn on an electric fan (according to the change of energy).

- The electrical energy is converted into kinetic energy which do the main function of fan and sound energy as wasted energy

10] To the change of energy when you turn on the television

- The electrical energy is converted into sound energy and light energy

11] If you shake a small bell with your hand. (according to the change of energy).

- The kinetic energy is converted into sound energy.

12] Hair dryer is operated

- The electrical energy is converted into thermal energy, kinetic energy and sound energy

13] Cool is burned

- It will produce thermal energy that changed into kinetic energy which is converted into electrical energy .

14] Electrical heater is operated

- Electrical energy is converted into thermal energy

15] You hold yours hand near to light bulb

- You will feel heat Because some of the electrical energy is also converted into thermal energy

16] You push on the bike petals

- Chemical energy is converted into kinetic energy which causes the bike to move and some of the kinetic energy is converted into thermal energy due to the friction between road and the tires

17] Turn on electric iron

- The electricity will flow through wires until it reaches the device it will convert into thermal energy

Concept 3.2

18] To a generator that is connected to a damaged turbine in an electric power station.

- Turbine cannot produce kinetic energy, so the generator will not turn and don't generate electricity.

19] To the movement of the turbine if the water in an electric power station is not heated

- Water will not produce steam, so the turbine will not move and will not produce kinetic energy

20] If pesticides mix with water of canals and rivers

- It causes the pollution of water and soil.

21] If acid rain falls on buildings for a long period of time.

- It causes dissolving of the rocks used for building

22] If people decrease burning fossil fuels

- The amount of carbon dioxide gas in air will decrease.

23] To the amount of fossil fuels if people don't conserve their usage

- Fossil fuel will run out on the Earth.

24] Cutting down trees

- Cutting down trees as a faster rate than they can grow leads to deforestation which has a negative effect on the environment

25] Burning fuels

- They will produce thermal energy

26] If the remains of dead living organisms were buried under the Earth's surface over millions of years.

- They are converted into fossil fuels

27] If the remains of sea animals are decomposed under the Earth's surface

Concept 3.3

- They will form oil or natural gas.

28] The radiant energy enters the greenhouse

- Greenhouses allow the entry of solar energy (especially radiant energy), then this radiant energy is converted into thermal energy that warms the inside of the greenhouses

29] The concave mirror used in cooking

- It collects and focus sunlight (sun rays) to heat metal pots and cook food inside it

30] Rivers run downhill

- The gravitational potential energy stored in water converted into kinetic energy that changed into electrical energy

31] Turbines and generators are stopped in dam

- They cannot convert kinetic energy of water into electrical energy so (They cannot generate electricity)

32] Stop building of dams

- We won't be able to generate more hydroelectric energy (electricity)

33] Water passing through blacks tubes.

- It will heat the water then the heated water will be stored in a water tank to be used later

34] Wind doesn't blow in an area that contains many modern wind turbines

- Blades don't move , So they can't generate electricity

35] Sunlight falls on solar panels

- The solar energy of the Sun is converted into electrical energy

36] Sunlight falls on a greenhouse

- The greenhouse absorbs the radiant energy from the Sun and convert it into thermal energy

37) The solar cells in a calculator are exposed to sunlight

- The solar cells absorb solar energy coming from the Sun and convert it into electrical energy that is used to charge the battery of calculator

38) The kinetic energy of a wind that is applied on the wind turbine increases

- The blades of wind turbine rotate faster and generate more electricity

39) There is difference in temperatures of air around Earth

- It causes the movement of air and wind blowing.

40) Water turbines are placed in a dam

- Potential energy of water behind dams is converted into kinetic energy which causes water turbines rotate and generate electricity

41) Potential energy of water increases behind a dam that has water turbines

- It converts into more kinetic energy which causes water turbines rotate faster and generate more electricity

42) Water of seas and rivers evaporates, then condenses in the atmospheric air

- Clouds are formed and rain may fall.

Concept 4.1

43) Waves crash the beach

- It will cause erosion process by moving sand away from the beach

44) Sediment down

- It leads to deposit of sediments process which means deposition occurs.

45) Sea waves hit coastal rocks over a long period of time

- The shape of coastal rocks will change due to breaking down of some parts of rocks

46) Breaking rocks into small pieces

- These particles will move to another place by erosion and then settle down by deposition process

47) A river carries sediments meet a sea

- A delta may be formed

Concept 4.2

48) To a flat land, if a water stream flows over it.

- A small canyon may be formed.

49) To a house that is built close to a river, if the path of the river is changed toward this house

- It causes weathering and erosion of the house.

50) To a small canyon if it rained a lot and water ran through it for a longer time

- The small canyon could get deeper

51) If a river erodes the sediments of a mountain over millions of years

- A canyon may be formed.

52) If the speed of the river water that is full of sediments decreases

- River drops the sediments which it is carrying forming deltas.

53) If wind that is carrying sand particles hits a big rock

- The shape of big rock will change and sand dune may be formed

54) To the sand in a desert when wind blows by a great force.

- The sand travels for long distance and sand dune may be formed

55) Rivers drain

- When rivers drain into a larger body of water they carry silt and sediments of soil and Rocks with them forming a delta

56) The greater the water flow

- It will cause more erosion

57) The water was traveling down a steep slope

- It erodes the land faster and Canyon will be formed over time

58) Rivers become slow movings

- sediments will drop down forming delta

59) The flowing water does not enter still water

- it will complete its ordinary flowing carrying more and more sediments

60) Erosion and deposition processes happen at the same time

- Sand dunes will be formed

Question 6 — Write the scientific term each of the following — Concept 3.1

1)	It is a way to describe the energy flow that occurs when we use different devices.	Energy chain
2)	The energy that comes in a device to be operated.	Input energy
3)	The main source of energy for most forms of energies on Earth	The Sun
4)	The energy used to play a drum.	Kinetic energy

5)	The energy produced from batteries.	Electrical energy
6)	The energy stored inside a tree	Chemical energy
7)	The energy that is produced from a device and doesn't help it do its main function.	Wasted energy
8)	robotic vehicle designed to explore the surface of Mars	Mars rover Curiosity
9)	The source of energy in some toys that stores chemical energy	Battery
10)	The energy produced when the wood of trees is burned	Thermal energy
11)	The energy produced from playing a guitar	Sound energy
12)	The energy stored in coal	Chemical energy
13)	A form of energy produced from the electric lamp and affects our eyes	Light energy
14)	Energy can neither be created nor destroyed, but only converted from one form into another	The law of conservation of energy.
15)	The energy that is stored in both batteries and food	Chemical energy
16)	The energy that is produced from the electric power stations and flows through wires	Electrical energy
17)	A form of energy that is produced from the electric heater and burning coal.	Thermal energy
18)	It is any substance which produces thermal energy on burning	Fuel

Concept 3.2

19)	Natural resources of energy, that take a short period of time to be renewed	Renewable resources of energy
20)	Natural resources of energy that take a very long period of time to be formed.	Nonrenewable resources of energy
21)	It is a form of biofuel that can be made from some types of plants such as grass and wood chips	Liquid fuel
22)	They are fuels that were formed from remains of dead animals and plants under the Earth's surface	Fossil fuels
23)	It is a form of fossil fuel that was formed from remains of dead plants under the effect of extreme heat and pressure	Coal
24)	It is a form of fossil fuel that was formed from dead marine animals	Oil or natural gas
25)	The substance that is produced from the remains of dead trees that buried deep in the Earth over millions of years.	Coal
26)	The clean energy resource that can be used in electric generation	water
27)	The main energy resource that plants and animals need it to survive	sun
28)	Energy stored uphill water rivers	Gravitational potential energy
29)	Energy that make turbines and generators in dams works	Kinetic energy
30)	Energy that produced due to the operations of turbines and generators in dams.	Hydroelectric energy
31)	A mill that is turned by water flow	Watermill
32)	A mill that is operated by wind movement	Windmill

33)	The type of energy that is produced from wind turbines to operate different home devices	Electrical energy
34)	An equipment that is used to convert the kinetic energy of wind into electrical energy	Wind turbine
35)	A type of mirrors that is used to collect and focus sunlight onto metal pots to heat them and cook the food inside	Convergent (concave) mirrors
36)	They help farmers in cold regions to plant crops which grow only in warm climate	Greenhouses
37)	An equipment consists of panels made of black pipes that is used to heat water at houses	Solar water heater
38)	A type of dams that is used to generate electricity using the flow of water	Hydroelectric dam
39)	A turbine in which the kinetic energy of moving water is used to generate hydroelectric energy	Water turbine
40)	A process in which water changes into water vapor	Evaporation process
41)	The process in which the water of rivers evaporates, then condenses forming clouds and return back to rivers through rainfalls	Water cycle
42)	The process by which sediment down Concept 4.1	Deposition
43)	The disappearance of a sandcastle as a result of its hitting with the sea waves	Erosion of the sandcastle
44)	Breaking apart rocks	Weathering
45)	They are deep valleys carved by flowing water.	Canyons
46)	Rocks that are found near seashores and broken by the effect of wind and water over long periods of time	Coastal rocks
47)	A process in which rocks are broken down into smaller particles	Weathering

48)	A process in which small broken rocks move from a place to another by the help of wind or water.	Erosion
49)	A process in which the sediments are dropped in a new location by the action of wind, water and gravity	Deposition
50)	A part of plant grows inside cracks of rocks causing their weathering	Plant roots
51)	The condition of atmosphere at a specific time and place	Weather
52)	It is a type of weathering through which acids of lichens dissolve minerals of rocks	Chemical weathering
53)	It is a type of caves that is formed when dissolved minerals of rocks combine again in new shapes	Limestone caves
54)	It is a process through which water forming ice in cracks of rocks	Freezing process
55)	A gas in air combines with iron of some rocks and causes its weakness	Oxygen gas
56)	A fan-shaped (triangular) mass of sediments that is formed where a river enters a larger body of water like seas	A delta
57)	A hill of sand created by the wind.	A sand dune
58)	They are small solid materials such as sand, soil and small rocks that carried by water to another place	Sediments
59)	The force that pulls down broken weathered rocks at mountainsides	Gravity
60)	It is a special type of valleys whose its sides are steep	Canyon
61)	It is the process by which the wind that carries rock particles and sand carves big rocks into different shapes.	Erosion process
62)	The two processes that have the main role in the formation of canyon.	Weathering and erosion processes

Concept 3.3

Concept 4.2

63)	They are lowland areas in between mountains and have gently sloped sides around rivers	Valleys
64)	They are landforms which are made of windblown sand when something like rock blocks the wind.	Sand dunes
65)	Lowland areas in between mountains	valley
66)	Hills that are made of sand	Sand dunes
67)	Valleys are formed by	rivers and streams
68)	Very fine bits of sand, clay or rock materials	silt

Question 7 Correct the underlined words

Concept 3.1

1)	Energy can neither be created nor destroyed, but only converted from one form to another, this is the law of consuming of energy	Conservation
2)	The consumed energy while burning some pieces of wood is the thermal energy.	Chemical
3)	Light energy is stored inside the battery of a mobile phone	Chemical
4)	Toy cars depend on fuel as a source of electrical energy	Batteries
5)	Light energy, thermal energy and chemical energy are produced when a mobile phone is used	Sound
6)	The solar energy produced from the moon can be converted into different forms of energy.	Sun
7)	Curiosity is a robotic vehicle that is designed to explore the surface of moon.	Mars
8)	Most of energy chains start with the moon	Sun

9)	There is a stored thermal energy inside the food we eat	Chemical
10)	The input energy in a hair dryer is the chemical energy	Electrical
11)	Coal is the main source of most energies on the Earth's surface	Sun
12)	Fuel is the substance that produces electrical energy on burning	Thermal energy
13)	We have to increase planting vegetables and fruits that need a large amount of water (Concept 3.2)	a small
14)	In houses, gasoline is used in cooking food as it is one of the oldest known biofuels.	wood
15)	The moon is the main source of both biofuel and fossil fuel	The Sun
16)	We can use some animals to make a liquid biofuel	plants
17)	The rate of usage of fossil fuels must be increased	decreased
18)	Wood is a form of fossil fuels that can be used in houses	biofuels
19)	Water is a nonrenewable resource of energy that can be used as a fuel in cooking food and moving cars.	Natural gas
20)	We can conserve oil by increasing the use of private vehicles	reducing
21)	Solar panels use sound energy to generate electricity	solar
22)	Water turbines generate electricity by using the energy of wind movement	water flow
23)	Manual mixer depends on electricity to do its function	Electric
24)	In the absence of the light of moon, living organisms cannot survive	the Sun

25)	Thermal energy and sound energy are produced from the Sun and reach the Earth	light
26)	Small solar panels are used to supply one light bulb with sound energy.	electrical
27)	Potential energy of the wind is converted into electrical energy by wind turbines	kinetic
28)	The difference in temperatures between cold and hot air causes air to stop	move
29)	Water turbines rotate when their blades rotate as wind blows.	Wind
30)	When air blows into the wind turbine strongly, the blades spin slower	faster
31)	The thermal energy generated by water turbines in dams is known as hydroelectricity	electrical
32)	During the flowing of rivers water downhill, the chemical potential energy of water is converted into kinetic energy	gravitational
33)	Dams are built on rivers in order to generate solar energy	electrical
34)	The electrical energy is generated by wind turbines in dams	water
35)	The deep valley that is carved by flowing water, is known as coastal rock (Concept 4.1)	Canyon
36)	Disappearance of a sandcastle in few minutes is an example of slow changes.	Fast
37)	Canyons are formed due to fast changes	Slow
38)	The movement of sediments from one place to another, is know as deposition	Erosion
39)	Weather is the breaking down of rocks on Earth's surface into tiny pieces	Weathering

40)	Plant leaves grow inside the cracks of rocks which become wider	Roots
41)	Weathering process followed by deposition process in reshaping Earth's surface.	Erosion
42)	Sand grains can be carried for a short distance by strong wind	gentle
43)	When sediments are deposited at the end of a river, a sand dune is formed	Delta
44)	Hills of sand which are found in deserts and seashores are known as canyons	Sand dunes
45)	Erosion process means that wind or water break down rocks	Weathering
46)	Erosion process is usually followed by weathering process	Deposition
47)	Deltas are formed by weathering process	Deposition
48)	Dunes are lowland areas which have gently sloped sides	Valleys
49)	Small canyons are formed due to the flowing of wind through a desert	Sand dunes
50)	Big streams cause more deposition than small streams	Erosion
51)	Nile River Delta has a rectangular shape.	Triangular
52)	Limestone caves are formed due to the combination of red-colored rust.	Dissolved minerals
53)	When the water of a river travels down hill on a steep slope, its speed will decrease	Increased

Concept 4.2

Question 8 Vairous questions

Concept 3.1

1] Use the following words to complete the energy chains below. (You may use the same word more than once).

(Thermal - Chemical - Kinetic - Electrical - Sound - Light)

(1) The energy chain of burning some branches of a tree :

Solar energy (From the Sun) → Converted into → (Chemical) energy (Stored inside the tree) → Converted into → (Thermal) energy and (light) energy (When burning the wood of branches)

(2) The energy chain to operate electric blender

Solar energy (From the Sun) → Converted into → (Chemical) energy (Stored inside the coal from the remains of dead → Converted into → (Thermal) energy and (light) energy (in electric power stations) → Converted into → (Electrical) energy (Transferred in electric wires) → Converted into → (Kinetic energy And(sound)energy

2] Put each of the following words in front of the suitable sentence

[The Sun-Wood - Gasoline - Thermal energy]

(1) It is a form of fuel that is used in different means of transportation (Gasoline)

(2) It is a form of fuel that is used in warming houses. (Wood)

(3) It is a form of energy which is produced from burning fuel (Thermal energy)

(4) The main source of most energies on the Earth's surface. (The sun)

3] Compare between biofuels and fossil fuels (the type of energy resources) , (definition) , (examples of each of them)

	Biofuels	fossil fuels
the type of energy resources	renewable resources	nonrenewable resource
definition	They are fuels made from living organisms that can be planted (such as plants)	They are fuels that formed from the remains of plants and animals that were buried and decomposed over a very long period of time
examples of each of them	Such as charcoal , wood and some types of plants such as grass , corn and wood	Such as oil , natural gas and coal

4] Show the energy chain in hair dryer

Light energy (From the sun) → Converted into → Chemical energy (stored inside coal formed from the remains of dead tress) → Converted into → Thermal energy and kinetic energy → Converted into → Electrical energy (Goes through electric wires) → Converted into → Thermal energy, kinetic energy and sound energy (In the hair dryer)

5] Determine the important of greenhouse

Concept 3.3

- Greenhouses are used to help farmers to plant the crops that only grow in warm climate

6] Determine the output and input in greenhouse

- Input --> solar energy (radiant energy)
- Output --> Thermal energy

7] Determine the output and input in solar panels system

- Input --> solar energy (radiant energy)
- Output --> electrical energy

8] Determine the input and output energies in turbines and generators inside the dams

- Input --> kinetic energy
- Output --> electrical energy

9] Determine the input and output energies in windmills

- Input --> kinetic energy
- Output --> Mechanical energy (that used to grind grains)



10] Determine the output and input energies in watermills

- Input --> kinetic energy (that comes of water)
- Output--> Mechanical energy (that used to grind grains)

11] Complete the following energy chain by using the energies below

- (You may use each word more than once).

(Thermal - Electrical - Kinetic)

Burning of coal produces (thermal) energy

Converted into

(Kinetic) energy to move the machines of electric power stations

Wind blowing produces (Kinetic) energy that moves the turbines of wind turbines.

Converted into

(Electrical)energy that travels through wires to houses.

To operate

Television

12] Complete the following sentences using the words below :

(increases - solar cells - wind - wires)

1- Solar panels are composed of many small......(solar cells).........
2- The efficiency of wind turbines increases, when the kinetic energy of wind Increases
3- The electrical energy produced by wind turbine, is transmitted through big...Wires) ....to different houses

4- difference in temperatures of air causes the blowing of… (Wind)………

13) Complete the following energy chain of a fan using the words between brackets: (You may use the same word more than once).

(Thermal - Radiant - Electrical - Kinetic - Sound)

1……(Radiant)…energy — From the sun

Converted into

2……(Thermal)… …energy — Causing temperatures vary between hot and cold air

Converted into

In wind turbines: 3……(Kinetic)… …energy.

Converted into

4……(Electrical)…. energy — Carried by electric wires

Converted into

5………(Kinetic)…. energy to do the main function of the fan

6. …(sound) and (thermal) energies as wasted energies in the fan

14) Determine the two factors that effect the Earth's surface

- Water - wind

15) Determine the difference between weathering and erosion.

- Weathering: is the breaking down of rocks into smaller particles

  Erosion: is the process in which the small particles of rocks are moved to other place



16) Complete the following sentences by using the words between brackets

(slow - erosion - fast-rocks - wind - water)

1. The shape of coastal rocks is affected by the forces of…(water) .and wind
2. The origin of sand is the breaking down of some types of……(rocks) ..
3. Air moving from an area to another and has a role in breaking down of rocks into smaller particles is known as ……(wind)……
4. The process of transporting small rocks from one place to another by the help of water or wind is known as……… erosion)………
5. Disappearance of a sandcastle is an example of…(fast)…changes, while formation of a canyon is an example of……(slow)……changes

17) Complete the following sentences by using the words between brackets:

(gravity - sand dunes - delta - deposition – weathering)

1- Wind in the desert may form...... sand dunes ......
2- When a river meets a sea......... delta ....will be formed
3- Erosion by......... gravity ....pulling small rocks down at mountainsides
4- The reshaping of the Earth's surface starts by...... weathering ....process followed by erosion process and then ...... deposition ....process

18) Mention how does the wind affect the sand?

- wind pick up sand while moving as wind stops blowing, sand drop down forming sand dunes
- the distance that sand travels depends on force of wind
- the way that the sand moves depends on direction of wind

19) Mention how does sand dunes form

- when wind blow, it carries sand with it
- as wind stop blowing, the sand drop down forming sand dunes

20) Mention how does the delta form

- Most Delta are formed when fast flowing water enters Slow moving water OR Still water
- Speed of river decreases and sediments drop down forming Delta

21) Compare between canyon ans valley (in terms of formation ,similarities and differences)

Canyons	Similarities	Valleys
• They are the areas that were eroded in mountains • Their walls are usually very high (have great depth), steep, narrow and consist of many layers of rocks.	• Both of them can be formed by rivers or streams. • Both of them often have rivers or streams flow through the lowest points	• They are lowland areas in between mountains. • They have gently sloped sides that usually surround a wide, flat plain.